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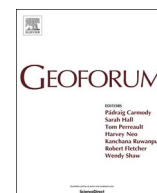
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# Resisting coal: Hydrocarbon politics and assemblages of protest in the UK and Indonesia



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## ABSTRACT

This article examines the social and material politics of coal, focusing on mobilizations against opencast mining in the United Kingdom and Indonesia. Contested spaces and practices elicited by coal extraction provide important openings through which to understand how 'hydrocarbon modernity' is experienced and entangled with different processes of neoliberal capitalism. We investigate resistance against coal at Ffos-y-Fran in South Wales and the IndoMet project in the Indonesian province of Central Kalimantan, exploring how assemblages of protest have challenged the material effects, discursive practices and regimes of accumulation attendant within the coal industry. In both countries, campaigns seeking to 'end coal' have built dynamic geographical alliances, and as collective challenges to mining activities have unfolded, we consider how movements targeting specific sites of extraction have sought to disrupt the industry's 'dis-embedding' of coal from the landscape. Drawing on accounts of how hydrocarbon politics shape societies, the approach we present draws attention to changing linkages between economic, environmental and social advocacy while illuminating the varied ways in which coal mining can compound and perpetuate inequality.

## 1. Introduction

Described by the philosopher Jean-Paul Sartre as 'capital bequeathed to mankind by other living beings' (Sartre, 1977: 154), coal has been at the heart of material transformations in how humans live, work and relate to one another since the Industrial Revolution. Strauss et al. (2016: 10) refer to energy as a 'master resource' that 'empowers and transforms the world as it flows in varied forms through natural and social circuitry', and the legacy of coal lies not only in fuelling steam engines, powering industry and generating electricity, but in how it has enabled or constrained particular modes of political and economic power. Historically, coal has underpinned patterns of capital accumulation and uneven development, but also provided the conditions for workers to develop solidarities, mobilize their collective power to disrupt the flow of energy and effectively pursue democratic claims (Huber, 2008; Malm, 2013; Mitchell, 2011). It is impossible to understand coal without acknowledging the story of its production and the conflicts engendered throughout this process. As Malm (2013: 17) observes, 'fossil fuels should, by their very definition, be understood as a social relation: no piece of coal or drop of oil has yet turned itself into fuel.'

In recent years, growing public concern over climate change has compounded aversion to coal, further undermining an industry already

opposed for its adverse effects on health, wellbeing, and local ecologies (Arsel et al., 2015; Bell and Braun, 2010; Bell and York, 2010; Connor et al., 2009; Morrice and Colagiuri, 2013). As the most carbon intensive fossil fuel, a phase-out of coal has been advocated as one of the simplest and most effective means of reducing carbon emissions, and as the world undergoes a 'socio-technical transition', edging closer towards a low carbon energy system (Bridge et al., 2013; Smith et al., 2005; Tyfield, 2014), coal's persistence – signalled in the continuing political support for new mining and infrastructure projects by some governments – has invariably frustrated opponents. Legal challenges, divestment campaigns and protests by NGOs and environmental activists have all buttressed calls to 'keep it in the ground', coinciding with research suggesting as much as 80% of proven fossil fuel reserves constitute 'unburnable carbon' (Carbon Tracker, 2011; Cooke, 2015). In the run up to the 2015 Paris Agreement, United Nations Framework Convention on Climate Change (UNFCCC) executive secretary Christiana Figueres echoed the language of civil society in warning bluntly, 'there is no space for new coal' (The Guardian, 4 May 2015). However, while renewable energy appears set to eclipse coal in the coming decades, the International Energy Agency's World Energy Outlook forecasts that coal production will continue to rise, increasing 10% by 2040 (IEA, 2015a, 2015b). Sites of extraction have thus become a focal point for social mobilizations seeking to highlight the procedural and distributive

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inequities associated with the continued exploitation of fossil fuels. Such sites are also spaces of convergence, between locally rooted place-bound struggles to rectify localized experiences of injustices as well as universal political imaginaries and identities underpinned by ideals of global environmental responsibility (Connor et al., 2009; Harvey, 1996; Schlosberg and Collins, 2014).

In this article we examine contested spaces elicited by coal extraction, drawing on experiences in the United Kingdom and Indonesia. Taking as our point of departure Mitchell's (2011) observations on how political relations are engineered out of flows of energy, our research sets out to identify how contemporary resistance to coal is manifested and entangled with broader configurations of economic and political power. We focus on assemblages of protest related to two geographically specific sites of extraction, exploring challenges to the material effects, discursive practices and regimes of accumulation attendant within the coal industry. Through analysing social mobilizations against opencast mining at Ffos-y-fran in South Wales, and the IndoMet project in the Indonesian province of Central Kalimantan, we aim to illustrate the ways in which coal extraction is negotiated and contested at different scales, emphasizing how regional histories and development trajectories intersect with transnational concerns to shape the contours of protest. In doing so, we shed light on the spatiality of social movements and how the material contingencies of energy inform their activities.

In the following section, we begin by theorizing the relationship between energy and social movements, briefly outlining how coal has been conceptualized as a 'resource' and incorporated within wider political struggles. Drawing on insights from anthropology and critical geography, we emphasize coal's hybridity, contingent politics, and the diverse forms of value with which it is associated. The next section discusses our approach and introduces each case study, and the following sections investigate movements of resistance against coal, exploring how discontent is articulated and enacted within particular contexts. We emphasize how coal has given rise to dynamic protest assemblages and situate its extraction within a regime of accumulation that compounds and perpetuates inequalities. Our conclusion reflects on the ways in which coal is legitimated and contested, connecting geographically dispersed interests through common repertoires of struggle.

## 2. Theorizing resource geographies –hydrocarbon modernity and contestations over coal

We begin with the proposition that coal mining protests provide important openings through which to navigate the intersections between experiences of 'hydrocarbon modernity' (Appel et al., 2015) and related processes of neoliberal capitalism. The conversion of coal into 'energy' exposes modernity's contradictory insistence on separating the domains of nature and society (Latour, 1993). As Bridge (2009a: 43) writes, 'underground lies a world of 'natural production,' the deep-time processes beyond human control that create the hydrocarbon concentrations we know as fossil fuels...Above-ground and freed from geological fixity, energy is thrown into a tumultuous world of 'social production'". Once extracted from the ground, coal is no longer conceived of as organic matter – it becomes 'privatized and converted into standardized, appropriable, deliverable units' (Lohmann, 2016: 1), commodified and incorporated into circuits of capital accumulation. This act of translation serves to dis-embed coal from its conditions of production, concealing both its geological origins and the processes and practices that deliver it to global markets.

In recent years, there has been a resounding call for a re-engagement with materiality in resource geography, considering how the material world might constrain or enable social relations around sites of production (Bakker and Bridge, 2006). Huber (2008) and Malm (2013) provide historical materialist accounts of how coal's status as a concentrated, 'energy dense' and a geographically mobile form of fuel were

an important factor in its adoption over water power or wood fuel during the Industrial Revolution. These material, biophysical properties allowed capitalists to relocate factories to more profitable sites near urban population centres that offered readily exploitable labour over which they could exert tighter control. The widespread adoption of this concentrated form of fossil energy, which coincided with the emergence of new socio-technological systems to harness flows of energy (a key moment being James Watt's invention of the rotary steam engine in 1776), accelerated the supply of available fuel and the pace of manufacturing, thus altering human relations through appropriating and redistributing time and space (cf. Harvey, 1996; Hornborg, 2013). This corresponds with the work of Mitchell (2011), whose approach illuminates the ways in which the parameters of political possibility are delimited by complex arrangements of people, finance, expertise and violence to organize or concentrate the flow of energy. His research illustrates the integral role of fossil fuels in underpinning particular forms of political and economic power, and demonstrates how the physical attributes of coal – its bulkiness and heaviness – were instrumental in producing new forms of mass politics across Europe in the nineteenth and early twentieth centuries. Coal required an extensive labour force to mine and transport it, and the energy on which industrial capitalism depended became susceptible to disruption through strikes and sabotage at mines and railways, enabling workers to make effective democratic claims.

The manifestation of these 'contentious' forms of political expression can be understood as a product of social movements: forms of collective action that emerge in response to experiences of injustice, oppression or dissatisfaction with the status quo (Tarrow, 1999; Tilly, 2004). Movements are distinct from organizations or singular events, since they present sustained, collective challenges to those in positions of power and are contingent on a collective identity, common purpose and the diffusion of shared beliefs amongst participants (Della Porta and Diani, 2009). Tracing the history of coal reveals linkages both to 'old' social movements dedicated to winning material gains for labour in workplace struggles, and 'new' social movements which have flourished since the 1960s, articulating demands pertaining to the environment, human rights, identity, territory, livelihood and nationalism (Bebbington et al., 2008; Conde and Le Billon, 2017; Russell, 2014). In the latter case, coal is caught within competing narratives over its utility and value, and the emphasis placed on specific grievances may shift at different scales and between social movement actors.

Struggles against coal fall under the umbrella of the environmental movement, 'one of late modernity's signature social movements' (Jasanoff, 2001: 310), and have brought diverse interests together in coalitions seeking to highlight the harms engendered by the mining and burning of fossil fuels. While 'modern' environmentalism has a problematic history, marred by charges of elitism and racism (cf. Koseck, 2004), recent decades have witnessed the ascendancy of new paradigms of environmental justice. Emerging critical approaches draw attention to the procedural inequities that occur when certain groups are excluded from participating or marginalized in decision-making over resource use, and the uneven distribution of environmental burdens and benefits as stratified by class, race and gender (Bell and Braun, 2010; Schlosberg and Collins, 2014; Urkidi and Walter, 2011). Accordingly, there have also been efforts to challenge the Eurocentric representation of environmentalism as a purportedly 'post-materialist' movement, through highlighting the 'environmentalism of the poor', in which forest dwellers, peasant farmers, fishers and indigenous people have sought to preserve livelihoods by defending land and resources from encroachment by the state or capital (Martinez-Alier, 2014), and an 'environmentalism of the malcontent', using the example of protests against a coal power plant in Turkey to illustrate the different political logics which animate resistance. In this case, protests gained traction by incorporating a critique of neoliberal developmentalism and drawing attention to coercive and anti-democratic state tendencies, foregrounding land acquisition, dispossession and displacement (Arsel

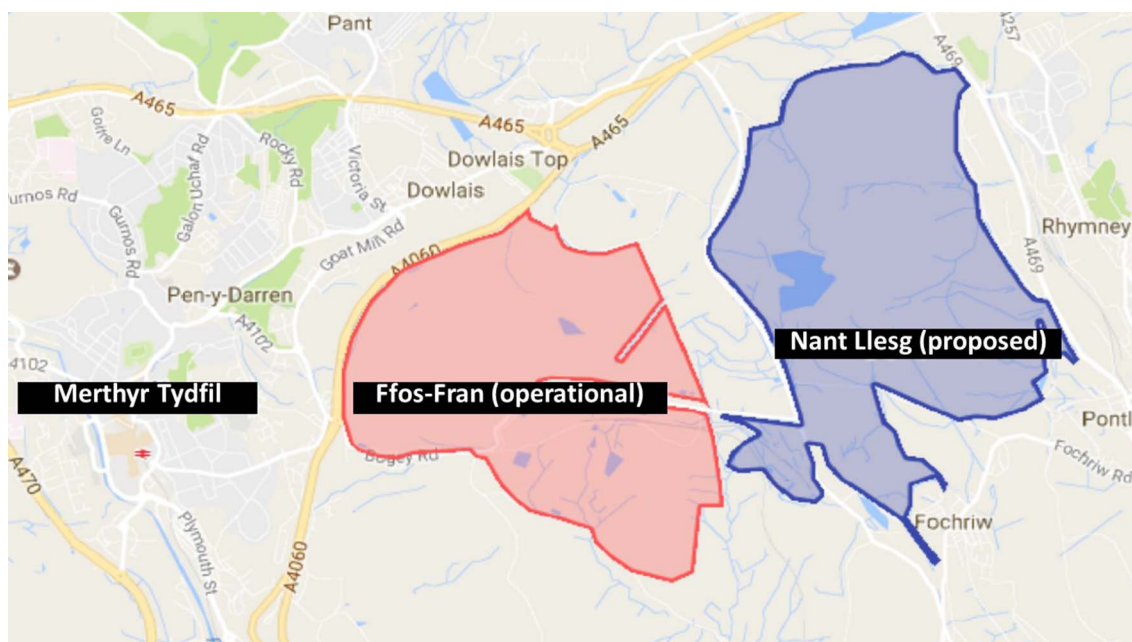


Fig. 1. Site of existing and proposed mining developments and their proximity to settlements.  
Source: author/google.

et al., 2015). These insights have been supplemented by research from the Czech Republic, which demonstrates the significance of place attachment and broader political consciousness as important motives for participants engaging with anti-coal activity (Frantál, 2016), and from Colombia, emphasizing the anti-imperial character of resistance to coal mining following a long history of struggle against the foreign domination and control of natural resources (Chomsky, 2016). The diverse array of groups resisting coal has inevitably engendered internal tensions and movement dynamics as values are realized through acts of cultural translation across space – Anna Tsing’s points of ‘friction’ as movements operate under increasingly globalized processes that create ‘zones of awkward engagement’ between chains of different actors at the local, national and international level (Tsing, 2005: xi). Attention to this politics of scale, understanding coal to be embedded within a networked ‘socio-spatial struggle’ (Swyngedouw, 2004), is critical to understanding how social movements form and coalesce across boundaries, as transnational movements mobilize people in disparate locations around a common cause to produce new norms and solidarities (cf. Della Porta and Diani, 2009).

### 3. Approach and contexts for analysis

Our research is situated within a political ecology framework, examining ‘the constantly shifting dialectic between society and land based resources, and also within classes and groups within society itself’ (Blaikie and Brookfield, 1987: 17). Our approach is informed by recent geographical scholarship emphasizing the co-constitution of nature and society, envisioned variously as ‘socio-nature’ (Swyngedouw, 1999), ‘natureculture’ (Haraway, 2003), or material semiotic ‘hybrids’ (Latour, 1993; Law, 2009). Following Haarstad and Wanvik (2016: 2), we pursue an exploration of carbonscapes, ‘the spaces created by material expressions of carbon-based energy systems and the institutional and cultural practices attached to them’, and deploy the notion of assemblage to map out the dynamic web of relations between social actors and the material world that they inhabit. Appel et al. (2015: 24) speak of ‘the varieties of actors, agents, infrastructures, processes and imaginaries – what we call the oil assemblage – that give shape to our contemporary iteration of hydrocarbon capitalism’, and coal is similarly entangled, contingent upon particular socio-technical arrangements

that facilitate its extraction and conversion into energy (Mitchell, 2011). The idea of assemblage can be helpful in theorizing the diverse relations between power, politics and place, concerned as it is with ‘why orders emerge in particular ways, how they hold together, somewhat precariously, how they reach across or mould space’ (Muller, 2015: 27). Colin McFarlane (2009: 561) has described assemblages as ‘materially heterogeneous, practice-based, emergent and processual’, highlighting the ways in which overlapping material, discursive and collective relationships produce particular configurations of power at different scales and particular historical moments (cf. Ong and Collier, 2005). By drawing on these insights, we are better placed to understand processes of rupture and transformation around sites of extraction, as protest assemblages disrupt the logics of incumbent, carbon-based energy regimes.

Our approach was developed from a range of fieldwork experiences that are specific to the coal sectors in the UK and Indonesia. Between May and July 2016, the first author attended events as a participant-observer, including the ‘End Coal Now’ protest camp in Wales, a ‘Save Druridge Bay’ rally against the Highbury surface mine in Northumberland and a presentation by the UK-based Coal Action Network. This fieldwork was supplemented with analysis of archival material (press items, campaign literature, corporate briefings), and followed by a series of phone interviews with informants from the United Valleys Action Group (UVAG), a local campaign group opposing opencast in South Wales. Ex-pit miners, farmworkers, local parents and retired residents of neighbouring towns and villages were amongst those interviewed, affording insight into the motivations and engagements of grassroots campaigners across the region. Between July and December 2016, the second author, building on his previous work in Indonesia, conducted fieldwork in three regions of Indonesia – Central Kalimantan, East Kalimantan and Jakarta – including interviews with Indonesian activists protesting the IndoMet project, workers and contractors involved in coal mining, government officials, affected community members and other NGOs (of protest, which in turn ‘signify doing, performance and events’ (McFarlane, 2009: 562) and reflect the fluid and unstable dynamics within social movements.

The first case study centres on experiences attending the *End Coal Now* camp at the site of the UK’s largest opencast coalmine, Ffos-y-Fran in South Wales. In May 2016, hundreds of people from the UK and



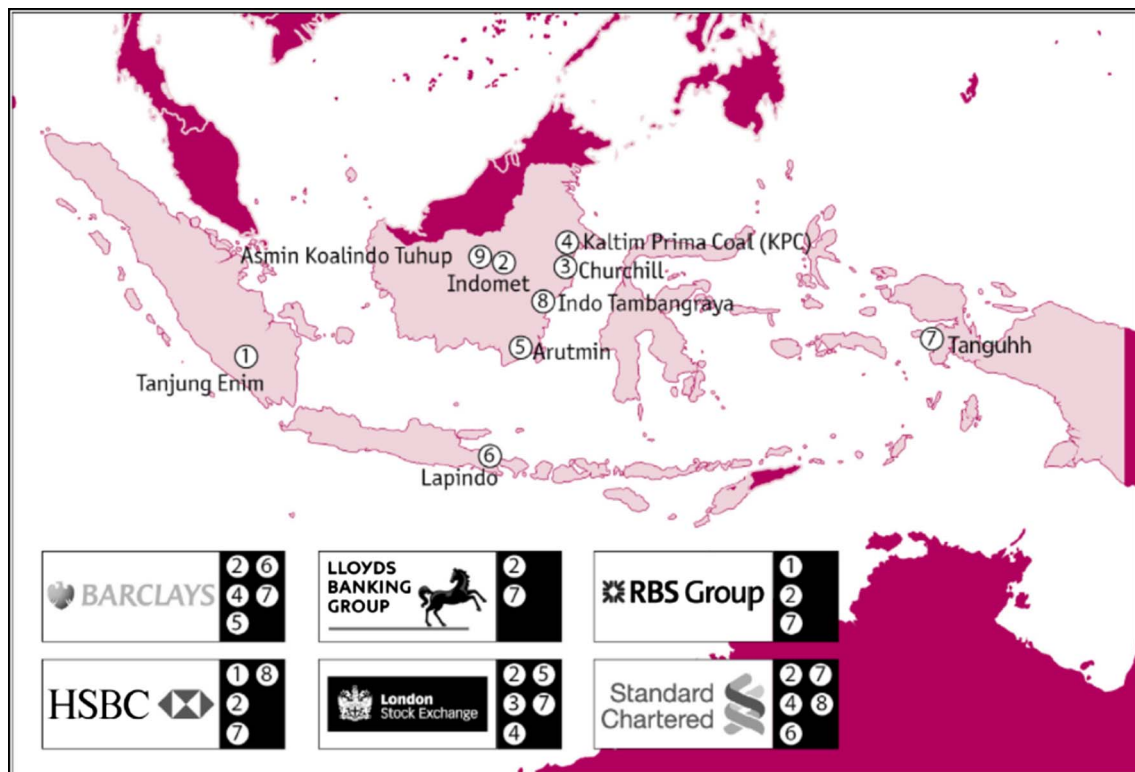


Fig. 2. Major fossil fuel projects in Indonesia linked to the UK financial sector.  
Source: World Development Movement, 2013; reproduced here with permission.

Europe converged on a windy stretch of open moorland adjacent to Ffos-y-Fran, a massive excavation spanning 1000 acres and itself situated only a few hundred meters away from the town of Merthyr Tydfil (Fig. 1).

Over the course of four days, a protest camp was initiated to oppose plans for new coal extraction, an event culminating in a mass trespass with over three hundred people risking arrest to enter the mine, shutting down site operations just three days before Welsh Assembly elections. The camp had been instigated by Reclaim the Power (RtP), a UK-based environmental activist network, following correspondence with UVAG (interview, 8 July 2016). This dramatic act of civil disobedience followed years of more routine, grassroots campaigning by residents - organizing petitions, public meetings and objection letters directed at local councils - and spurred a deeper exploration into the anatomy of this conflict and its broader socio-spatial dynamics.

Although the UK government has pledged to phase out unabated coal-fired power by 2025 (Department for Energy and Climate Change, 2015), and Britain's last underground colliery closed at Kellingley, North Yorkshire, in 2015, opencast mining has continued in some parts of England and Wales and plans for expansion have proven contentious. Coal remains an important marker of culture, territory, and history; it was coal that birthed the labour movement and sustained the trade unions (Rees, 1985). Indeed, the 1831 Merthyr Rising, which occurred in the same region that was visited for the *End Coal Now* camp 185 years later, was instigated by coal and steel workers dissatisfied with low wages and unemployment and prefigured later forms of militant political organizing (Williams, 1978). Until the Conservative government's assault on miners' unions in the 1980s, coalmining was at the heart of communities where it occurred, comprising the core of social identities and fostering a culture of camaraderie, solidarity and collective organization. In the aftermath of pit closures and privatization, structural unemployment and social dislocation has continued to blight former coal communities, and memories of the 1984–5 miners' strikes have cemented the totemic status of coalmining as a former bastion of the British working class (Chatterton, 2008; Parry, 2003).

Nevertheless, the formation of a growing environmental consciousness since the 1960s (cf. Jasanoff, 2001), and the litany of complaints arising from opencast methods in particular have rendered coal increasingly unpopular, with one councillor presiding over a recent decision to grant consent to a new mine in Northumberland admitting 'an unprecedented level of opposition... [it is] one of the most controversial decisions that we've taken' (field notes, Northumberland Council Chamber, 5 July 2016).

While coal production has been in overall decline in Britain since the mid-1980s, Southeast Asia is one significant region where it has experienced a resurgence, with coal's contribution to the region's energy mix forecast to more than triple by 2040 (IEA, 2015a, 2015b). As the world's top coal exporter, Indonesia has witnessed the effects of massive coal expansion: following deregulation of the coal sector in 1983 to attract foreign investment, transnational mining companies geared production towards export rather than domestic consumption due to the higher profit margins available, and propelled by demand from India and East Asia, mining activity rapidly proliferated in the coal rich territories of Sumatra and Kalimantan (Fünfgeld, 2016; Lucarelli, 2010; Denton, 2014). Until the 1980s, Kalimantan's forests remained largely intact and in the absence of large-scale industrialization and urban infrastructure, indigenous Dayak inhabitants continued to practice swidden agriculture in the island's interior (Tsing, 2005). However, resource extraction accelerated amidst large shifts in the region's political, demographic and economic structure, marked by emergent capitalist relations, class and ethnic cleavages and the violent restructuring of property regimes (Li, 2014; Peluso and Harwell, 2001; Peluso, 2005; Tsing, 2005).

The commencement of large-scale mining operations along 'resource frontiers', zones encompassing 'the last remaining forested landscapes where natural resources have not yet been enclosed, extracted, and incorporated into circuits of production and consumption' (Barney, 2009: 146) has provoked outcries of diverse natures. In the coal mining context of Kalimantan, protests have brought together smallholder farmers, neighbouring villagers and national and

international NGOs (Fünfgeld, 2016; JATAM, 2010; WDM, 2013). Efforts to bring global visibility to the contested spaces elicited by coal extraction are centred on linking regional injustices in ‘marginal’ zones with transnational investment flows and governance regimes. UK-based NGO movements (World Development Movement, 2013, 2014) have mapped the extensive involvement of the UK financial sector in coal mining operations in Kalimantan and Indonesia more broadly (Fig. 2). Cross-territorial alliances have sought to not only resist further coal mining and associated infrastructures, but demand accountability to rectify injustices arising from damage to forest ecosystems, displacement and loss of livelihoods.<sup>1</sup>

At the same time, although Indonesia’s recent coal boom has produced major environmental, health and political inequities that continue to persist, the industry’s impulse for expansion has rapidly subsided. Indeed, in the aftermath of plummeting prices for coal, which dropped from \$218 per tonne in 2008 to \$53 in 2015, the country is now witnessing the departure of some foreign mining companies as profitability falls and operators are reluctant to accept responsibilities for abandoned or exhausted coal seams (Jensen, 2016). To set the context in this regard, as stressed by Rompas in his trip in London in October 2016, Indonesia’s coal sector has recently seen new cases of corporate hand-overs where one transnational company’s shareholdings become replaced with another company, thereby creating new difficulties in holding companies to account for recent environmental injustice. Some of the interviews and participant observation experiences stressed the difficulties of the transnational protests, where efforts to bring global visibility to ongoing environmental injustices in the coal sector are centred on linking regional injustices in mining areas with transnational investments and transnational complicities. Interviews also explored how advocacies have adapted to shifting regional political terrains, seeking to build cross-territorial alliances to counter particular coal mining effects and new infrastructure developments including the construction of railways for coal mining.

Movements resisting coal in Welsh and Indonesian contexts might be imagined in a variety of ways; for example, one might accentuate differences in the significance of particular regimes of coal mining governance and/or existing levels of coal mining road/railway infrastructure, or differences in how activists are confronting varying sets of ‘formal’ and informal systems exist for politics and economic rent, etc. However, what we seek to emphasize is *how* movements responding to specific mining projects – each part of a global anti-coal campaign – have been contingent on particular moments of political possibility, and how they have each drawn on *multiple scales* of geographical alliance-building to counter the prevailing logics and influences of the coal industry. In this respect, we emphasize how complex assemblages of material, discursive and collective practices intersect to structure relations around coal, producing particular configurations of power across space and time (Ong and Collier, 2005).

#### 4. Coal at the crossroads

##### 4.1. Opencast in Wales: A changing landscape

The hostile reception to opencast mining in the Welsh valleys is indicative of coal’s ability to encapsulate multi-scalar, hybrid political imaginaries and of its material potency in driving new forms of collective action. Since a public inquiry first mooted opencast mining at Ffos-y-fran in 2003, plans for new coal have been fiercely resisted, spearheaded by neighbouring communities under UVAG, and

supported by various national and international actors affiliated with the wider environmental movement (NGOs and activist networks including Friends of the Earth, RtP, and 350.org). Tracing the shifting contours of protest since the mine’s inception reveal how it has emerged as a focal point around which dynamic, practice-based assemblages have coalesced, combining political participation through formal decision-making channels with civil disobedience and direct action.

The overlapping relations between ‘matters, knowledges, infrastructures, and experiences’ (Richardson and Weszkalnys, 2014: 8) help to explain the shifting perceptions of coal in this largely post-industrial landscape. The high levels of pollution associated with Ffos-y-fran, which spans a site directly adjacent to the town of Merthyr Tydfil, are compounded by the mine’s close proximity to neighbouring residents (see Fig. 1), who complain of ‘phenomenal’ amounts of dust and noise, long hours of operation, and the stark visual impact of opencast excavations. Health concerns have been significant in galvanizing local opposition, consistent with research suggesting that airborne toxins and particulate matter derived from coal can increase respiratory complaints, cancers, and heart and kidney diseases (Morrice and Colagiuri, 2013). One former pit miner living close to the site contrasted the opencast excavation at Ffos-y-Fran to his former colliery, where health impacts were confined to workers in the pit who could claim compensation: ‘whereas when we went underground we were paid, and we had schemes if we got ill. Now the children will have ill health...here you see the black dust on the car window, garden furniture, laundry on clothes lines,’ (interviewee, Merthyr Tydfil, 10 July 2016). Such concerns have been augmented by a recent visit from the UN’s Special Rapporteur on Hazardous Substances, who subsequently called for an independent inquiry into the mine’s health implications (Messenger, 2017). However, the material effects of Ffos-y-Fran transcend the immediate locality: coal from the site is used to feed the 1500 MW Aberthaw power station in the Vale of Glamorgan, which has been threatened with closure over breaching EU limits on nitrous oxide. Over the course of its twenty-year lifespan, the mine itself is expected to produce 11 million tonnes of coal, equivalent to an estimated 30 million tonnes of carbon dioxide (Mason and Milbourne, 2013; Messenger, 2016). As the UK’s largest operational coal mine, it has therefore become a symbolic target for climate activists exasperated with the slow pace of decarbonization.

Despite the historic presence of mining around Merthyr, most wealth previously generated by the industry has not remained in the area, and some segments of the district are classified as being in the 10% most economically deprived regions of Wales, with high rates of claims for incapacity benefit, high unemployment and lower than average life expectancy (Dolman, 2010; Mason and Milbourne, 2013). The historical memory of coal in the region, and current experiences of economic hardship were alluded to during interviews, with one retired worker remarking ‘any industry that came [afterwards] has never lasted, or given the backbone of work that coal did’ (interviewee, Merthyr Tydfil, 13 July 2016). The defiant reaction to the closure of the nearby Tower Colliery, which was purchased by miners and run as a cooperative for a further 13 years after being declared ‘unviable’ in 1994, is emblematic of coal’s enduring and symbolic link to organized labour. Indeed, the economic neglect of the Welsh Valleys following pit closures, and lack of visible, viable alternatives to mining, goes some way to explaining residual support for coal. Describing the excavation at Ffos-y-fran as a ‘reclamation scheme’ to restore ‘dangerous and derelict’ land affected by spoil heaps and old mine shafts, Miller Argent (the Welsh company operating the mine) point to their role as a regional employer for around 200 people and the prospect of further job creation from the proposed Nant Llesg extension (Miller Argent, 2016)<sup>2</sup>.

<sup>1</sup> WALHI’s three main advocacies regarding IndoMet are: (1) Stop the destruction of the Borneo Rainforest; (2) Ensure full compensation for the original land acquisition to local communities is realized and officially recognize the Dayak Murung indigenous peoples’ territories surrounding the Haju mine; and (3) BHP Billiton should be held legally responsible for pollution in the river due to damage to and leaks from the waste disposal pond.”

<sup>2</sup> An ecologist active in UVAG disputed Miller Argent’s restoration claims as exaggeration, asserting that spoil and damage affected only a small portion of the site and the remainder was common land composed of open moor and pasture (interview, 6 July 2016).

By UVAG's own admission, the renewed prospect of jobs and resources made available through the company's 'community benefit fund' thus held some appeal within certain segments of the community, although there were also claims from campaigners that opencast has deterred other industries from the region (Green Valleys Alliance, n.d.). One Merthyr resident commented 'opencast is universally hated apart from those benefitting financially' (interviewee, Merthyr Tydfil, 12 August 2016). Nevertheless, environmental themes remained central to local campaigning, with alarm at climate change considered an issue that did tend to resonate 'on the doorstep' (interviewee, Merthyr Tydfil, 12 August 2016). One member of UVAG, an ecologist who positioned himself as a middle class exception to the region's general working class demographic, described Rhymney as 'a UKIP<sup>3</sup> village...but the climate change issue has had some purchase, even in these communities' (interviewee, Rhymney, 9 July 2016). Such acknowledgement of global and intergenerational responsibility and environmental stewardship speaks to both the persistence of place attachment and the proliferation of environmental subjectivities as important forces animating resistance to coal.

#### 4.2. 'End Coal Now': Consolidating resistance at Ffos-y-fran

Prior to the *End Coal Now* camp, UVAG had adopted various strategies to galvanize public debate and opposition to opencast mining; staging a mock funeral outside the National Assembly for Wales, mobilizing 9000 people to submit letters of objection prior to the Nant Llesg planning decision, and undertaking legal action in the form of a Group Litigation Order (GLO) submitted against Argent Miller at the Cardiff District Registry by over 500 claimants (Houghton, 2016). Additionally, campaigners had engaged in information gathering exercises to build a case for protecting sites at risk from opencast mining, consulted with various public bodies, including Cadw (the Welsh government's 'historic environment' service, responsible for conserving Welsh heritage), the British Trust of Ornithology and Natural Resources Wales, who administer Sites of Special Scientific Interest (SSSIs) and protect areas from damage by development or unsuitable management or other activity (NRW, 2016). Following the sustained campaign mounted against Ffos-y-Fran and a proposed expansion at neighbouring Nant Llesg, in April 2015 the Welsh Assembly voted for a moratorium on opencast mining. However, this was non-binding, and while campaigners scored success when the planning application for a second mine at Nant Llesg was rejected by Caerphilly Borough Council in August 2015, Miller Argent is currently appealing this decision.

Echoing previous protests against a gas pipeline in the region, the arrival of the *End Coal Now* camp in May 2016 heralded Ffos-y-fran's emergence as a 'condensation point for wider concerns' (Groves et al., 2013: 340), with the camp attracting seasoned environmental activists from across the UK and Europe. Over the course of four days, participants attended workshops and discussions to strategize about their objectives, and to collaborate around a collective vision. Core values such as 'solidarity' were performed discursively and through robust efforts to involve local campaigners and amplify their voices; members from UVAG were invited to address the camp as guest speakers, and on the penultimate day, an outreach event was held at a nearby community centre where local families and camp participants had the chance to socialize at craft workshops and banner painting sessions. This forging of alliances resonates with Chatterton's assertion that because temporary spaces opened up by 'protest encounters are emotionally laden, relational, hybrid, corporeal and contingent, possibilities open up for...overcoming ontological divisions such as activist and non-activist' (Chatterton, 2006: 260), and exemplifies the process of social movement formation as disparate social groups coalesce around a

common purpose and identity (Della Porta and Diani, 2009).

Discourse at the camp was framed around environmental justice to encompass claims around participation, distribution and recognition, mirroring anti-mining movements elsewhere (Urki and Walter, 2011). From the outset, RtP made clear that the demand to end coal was coupled with a call for green jobs, recognizing the need for a 'just transition' away from fossil fuels that prioritizes social justice and protects workers in the structural shift towards a low carbon economy (Newell and Mulvaney, 2013). For example, the 'Action Agreement' of the camp manual stated:

*'We understand that the mine workers rely on their jobs to provide for themselves and their families. We will treat them with dignity and respect at all times. Our issue is with the company, the bosses and the government. Our demand is not only to leave fossil fuels in the ground...but also for the creation of rewarding employment opportunities for all, in an economy which respects our planet and all its inhabitants, now and in the future.'*

Reclaim the Power, 2016: 15

Mindful of concern about the potential closure of steelworks at Port Talbot on the south Welsh coast, camp literature was careful to distinguish between thermal coal destined for Aberthaw power station and metallurgical coal required for steel production. Correspondingly, there were also discussions on the prospects for 'green steel' production through, for example, renewable-powered Electric Arc Furnaces (Reclaim the Power, 2016). In part this reflected previous debates in the 'climate justice' movement over how to negotiate environmental and social priorities (Schlembach, 2011), broaching past antagonisms between environmentalists and workers through emphasizing how their interests were inextricably linked, and recalling the campaign slogan 'no jobs on a dead planet'.

The camp culminated with a mass protest action, an act of civil disobedience designed to generate maximum impact magnifying the ongoing struggle to transition away from fossil fuels. Over 300 protesters entered the mine to temporarily halt operations, indicating a turn away from activities within established legal and institutional structures to prefigurative actions that transgressed the political logic of the state, mobilizing collective power to interrupt the flow of energy (Mitchell, 2011). Mindful of media as a key determinant in shaping public discourse and generating political pressure, there was a strong visual identity to the protest and participants marked out a 'red line' in the mine (see Fig. 3) - a symbolic boundary and metaphor for the 1.5-degree target adopted at the 2015 Paris climate summit.

This protest assemblage, which employed performance and theatrics to amplify its message, posed a direct challenge to the legitimacy of mining practices at the site. The images captured from this spectacle exposed the material effects of coal, revealing the scale of the excavation dug into the hillside at Merthyr, and garnered international attention as news was shared on social media, transmitted through global environmental campaign networks such as 350.org and filtered down through national broadcasters such as the BBC. Indeed, reflecting on how the event had helped the local campaign, respondents from UVAG emphasized the value of media exposure, which concentrated national attention on a hitherto seldom reported issue (interview, 6 July 2015). The camp provided a focal point through which diverse grievances against coal could be articulated and circulated to a broader audience, connecting experiences in Wales with struggles elsewhere to secure environmental justice.

#### 4.3. Frontier politics: countering coal in Kalimantan

In Kalimantan, which spans the southern and eastern portion of Borneo and is territorially constituted as part of the Indonesian island archipelago, coal mining occurs in a radically different context. Unlike the UK, where opencast mining has proceeded despite coal's declining contribution to the energy mix and a planned phase-out by 2025,

<sup>3</sup> UK Independence Party, a right-wing populist political party known for its climate sceptic views.





Fig. 3. 'End Coal Now' protestors at Ffos-y-fran.  
Photo Source: Kristian Buus/Flickr 2016.

Indonesia's National Energy Policy (*Kebijakan Energi Nasional*) anticipates coal comprising 30% of the country's energy mix by 2025. In an effort to address power shortages and connect the estimated 50 million Indonesians lacking mains power, plans are afoot for 35,000 MW of new power stations in the country by 2019, including at least 20,000 MW from coal power alone (Chilkoti, 2015; *The Economist*, 23 March 2016).

Coal deposits are concentrated in Kalimantan's forested interior, areas inhabited by indigenous Dayak communities. Controversies over territorial aspects of coal mining plans have emerged, accordingly, as exceedingly contentious, adding to long histories of territorial resource conflict. The formalization of property regimes under Dutch colonial rule extinguished local claims to resources, and concentrated authority for licensing mineral extraction within a centralized state. In doing so, and by awarding exclusive resource rights to elites, it introduced a problematic interpretation of 'legality' that continues to persist in Indonesian society (McCarthy, 2000; Spiegel, 2012). This pattern of appropriation and enclosure continued upon independence, with customary *adat* law remaining conditional on recognition from statutory authorities (Peluso, 2005). Following the violent military coup instigated by General Suharto in 1965, reforms to mining foreign investment law were introduced to encourage extractive industries, but Suharto's 'New Order' regime (1966–98) was marked by a high degree of cronyism, with lucrative resource concessions for logging and mining granted to individuals connected with the ruling family (McCarthy, 2000). However, political space opened up the post-Suharto Reform era heralded a neoliberal restructuring of the state, most notably through fiscal and administrative decentralization. Local authorities were endowed with the power to issue mining permits, multiplying clientelist patronage networks in which material resources were disbursed by state representatives in exchange for political support (Aspinall, 2013). This phenomenon has been well documented in Kalimantan, where some coal companies have financed political candidates in elections in the expectation that they would be rewarded with mining concessions, and has left Indonesia's Corruption Eradication Commission highly critical of recent mining deals (Fünfgeld, 2016; Jensen, 2016).

In several coal mining regions in East and Central Kalimantan, dust along hauling roads and pollution to river systems have been cited as some of the most immediate concerns by villagers in concession areas, and affected residents have engaged in various strategies to protest the effects of mining on their livelihood practices and wellbeing; environmental organizations such as JATAM and WALHI have increasingly

been focused on documenting impacts and working with villages to conduct scientific assessments (interview with JATAM, Samarinda, August 2016). Protests have drawn attention to several problems, from experiences of adverse effects from coal mining in terms of contamination of soil, air and water and loss of access to land and forests. Between 2014 and 2016, several provincial government plans to develop railways to transport coal, with Chinese and Russian investors, have been heavily protested by WALHI and other organizations. Concerns have been raised that should any of the coal railway infrastructure projects (Coordinating Ministry for Economic Affairs, 2011) come to fruition, the wellbeing and health of the local indigenous population would be threatened, and environmental degradation would ensue. The IndoMet project, while most of its area has not moved to production stages and therefore not yet produced heavily documented impacts, has provided a particularly large example of a contentious coal mining project in the region, encompassing seven coal mining concessions totalling 350,000 ha. in East and Central Kalimantan. Initially managed as a joint venture between Australian mining company BHP Billiton and Indonesian firm PT Adaro – before BHP Billiton sold its shares in 2016 to Adaro, IndoMet exemplified the phenomenon of a vast megaproject with immense potential for social and economic transformations wrought by capitalist development.

Even though only one of the seven coal concessions in IndoMet has seen mining production activity come to fruition to date, the IndoMet project has already been implicated in a series of forced land sales dating back to 2004, when indigenous residents in Maruwei village were forced to accept token payments for their customary forest since they lacked formal title deeds. According to testimony from one member of the community, "We were forced to sell our land for Rp 100 [half a UK penny] per [square] meter. If we didn't sell it, the police would arrest us. The land meant a lot to us because we inherited it from our ancestors, and actually it had already generated a lot of money for us" (quoted in *Jakarta Post*, 20 May 2014). Despite coal concessions intersecting with biodiverse forests designated as the 'Heart of Borneo' conservation zone by the World Wildlife Federation, unresolved issues around forest tenure have exacerbated local grievances. The criminalization of local inhabitants' resource claims and livelihoods has been a recurrent issue in the region, and NGOs such as WALHI have sought to draw attention to the failure of the government to formally respect the land use practices of local inhabitants in the area encompassing the IndoMet concession. NGOs have protested how company representatives reported residents to the police for rice farming and





**Fig. 4.** Protesting coal mining at the 2016 BHP Annual General Meeting, London.  
Photo source: authors.

practicing shifting cultivation, deemed a proscribed activity under the Forestry Law. Concerns have been raised that IndoMet project has proceeded to undertake mining activity while interpreting its Contract of Work licence as if it were a land title (interview with environmental NGO activist, August 2016).

#### 4.4. Tensions in movement: Translocal alliances at IndoMet

As Anna Tsing's book *Friction* recounts, it was environmentalism that first articulated the language of democracy when other forms of political dissent were suppressed under the dictatorship of General Suharto; following the murder and execution of communists and left-wing activists in the 1965–7 purges that occurred with the ascent of Suharto's New Order regime, environmental law and advocacy was one of the few relatively safe outlets for political mobilization (Tsing, 2005). At the same time, it would be amiss to speak simply of a singular "environmental movement" in Indonesia – a term that could be seen as masking ideological divisions and divergent agendas between farmers, indigenous groups and international conservation NGOs such as WWF and the Nature Conservancy (Tsing, 2005; Li, 2007; Peluso et al., 2008). Different moments of advocacy reveal common tactics and divergent agendas that showcase different dilemmas in how to understand and approach environmentalism against coal. In the context of IndoMet, a plethora of critical concerns, agendas and strategies have surfaced. Dust along hauling roads and pollution to river systems have been cited as some of the most immediate concerns by villagers in concession areas, and affected residents have engaged in various strategies to protest the effects of mining on their livelihood practices and wellbeing; protest activities have included sending letters of complaint, and where tensions have escalated, through road blocks, although authorities have sought to contain this activity through arrests and detainments (interview with environmental activist, 11 August 2016). Communities in Kalimantan have been supported by the Indonesian environment network WALHI, which has worked to build broader alliances amongst indigenous rights networks and environmental activists, monitoring the practices of coal mining companies, equipping forest inhabitants with legal knowledge regarding their rights, and pressing the government to alter its policies in the coal mining sector. WALHI has, for example, been raising awareness of pre-existing land rights claims before BHP Billiton started mining production activities in 2014, and has tried to connect environmental opposition to coal mining to local rights of indigenous Dayak communities in Murawei village, one of the most villages most affected by the development (interview with Dayak activist, 24 July 2016). WALHI has argued to UK, Australian and Indonesian

media that IndoMet would not only be a disaster in the future but is already posing a significant social and environmental threat. According to WALHI, the block Haju mine in IndoMet has been conducting production since 2014, but was only granted permission by the Bupati (head of Distrik) for waste disposal permit in 2015. WALHI subsequently teamed up with UK researchers to conduct laboratory tests to assess impacts in the nearby river.

Common tactics that symbolically brought the coal mining controversies to the "global" level were seen when UK activists joined with the Indonesian activist movement to stage the series of protests outside of the BHP Billiton shareholders meeting in October 2016 mentioned above. One such moment highlights the performativity of protest to highlight the friction between elites and nature: the BHP Billiton executives and shareholders were literally made to trample over cardboard cut-outs of fish and other animals – symbolizing wildlife contaminated by mining activities, as the cardboard cut-outs were strategically placed on the ground by anti-coal activists outside of the convention centre building. Prior to the Annual General Meeting of BHP Billiton, London-based NGO activists had purchased stock shares so they could participate in the corporate proceedings at the meeting - and invited Indonesia, Colombian and Brazilian NGO representatives to all pose questions directly to BHP's CEO and management staff, drawing attention to community experiences; meanwhile, *outside* the BHP Annual General Meeting, theatrical techniques were also on display to protest the convergence of the destruction of nature, corporate profit and suffering (Fig. 4).<sup>4</sup>

The symbolic act of representing contamination was later linked up explicitly with the activities of BHP Billiton in specific instances of land conflict. As explained by Rompas at the events in London, BHP's transfer of its shares of IndoMet to Adaro occurred midyear in 2016 – but a week before the transfer, in June 2016, there was an incident where tailings ponds leaked and spilled into the Maruwei and Barito river where people live. Arie Rompas noted:

*"This was the second AGM experience for me, after Australia... the questions that I asked at this AGM were almost the same as the ones I asked in Australia two years ago... The difference is that we asked this year about pollution because the company has been operating now. In*

<sup>4</sup> Some protesters in London harkened to the legacy of corporate injustice in Bhopal, India – another example of transnational corporate irresponsibility in relation to a community wrought by the environmental disaster it generated- that was also met with highly performative protest tactics linking the local with the global, as discussed by Spiegel (2013).

*Australia the main demand was that BHP should get out, which they have done now. Even though they have gone, the problems remain – land compensation, recognition of indigenous rights, destruction of forest, and now the problem of pollution remains. The answers were almost exactly the same – the biggest difference now is the issue of pollution is much worse.*“

In some sense, BHP Billiton's departure from Indonesia and its selling of its IndoMet shares to Adaro represents a victory for a global environmental movement that has been calling for BHP to stop coal mining in Kalimantan. Indeed, a London-based campaigner described in an interview how this had been a several years-long goal – one that he had in fact explicitly emphasized in person to the board executives of BHP – and one that also served to create a common point of solidarity between UK-based and Indonesia-based anti-mining NGOs. Yet, as Arie Rompas's presentation stressed, BHP's departure has not halted the problems of coal mining; rather, it has produced new - reconfigured - sets of ambiguities about whether there will be any accountability for environmental injustice, given the problems to date. Fears have also been raised (by multiple interviewees – ranging from NGO activists to others involved in mining industry) that Adaro could be worse for communities than BHP in the future. Adaro is well-known as a politically powerful company in Indonesia and does not have the 'best practice' rhetoric that BHP Billiton has had in the past. Its takeover of the IndoMet constitutes what one East Kalimantan-based NGO advisor called (in an interview in September 2016) an "irony" of the campaign that has been waged against BHP Billiton.

## 5. Navigating terrains of resistance

The manifestation of resistance in Wales and Indonesia underline the need to understand energy not only as a 'resource', but as a social relation embedded within the 'geometries of power' under capitalism (Swyngedouw, 2004: 27). Globalization has resulted in new regimes of accumulation (Brenner, 1999), and neoliberal restructuring has blurred the boundaries of political and economic power; authority is now dispersed, decentred and fragmented, but also more pervasive in its ability to permeate everyday life (Allen and Cochrane, 2010). The abundance of fossil energy has allowed for the demarcation of 'the economy' as a sphere detached from nature and society, employing new modes of calculation and representation to disseminate technocratic discourses concerned primarily with resource rents and revenues (Mitchell, 2011). Practices have been standardized within bounded, ordered 'technological zones' (Barry, 2006), and social reality frequently simplified to that which is legible in accordance with corporate and state rationalities (Scott, 1998). These modes of governance ultimately serve to modify and reorder socio-ecological systems at both a material and symbolic level, in the form of calculated interventions by organizations or institutions that seek to remake society according to prescriptions of their own ideology (Li, 2007). This has produced newfound complexities as movements seeking to 'end coal' encounter ambiguity translating their grievances into more concretized forms of political action.

In the face of resistance against their operations, the collective response of the mining industry has been to channel resources into Corporate Social Responsibility (CSR) initiatives and to introduce a new, ethics-infused corporate discourse abounding with references to its environmentally and socially responsible conduct. As Lahiri-Dutt highlights, 'coal economies are produced (and shaped) by the regulatory frameworks, and are intricately interlinked with local and national politics of resources and identities of overlapping domains, each drawing upon their different notions of the meanings, morality and material values of coal' (Lahiri-Dutt, 2016a: 203; see also Lahiri-Dutt, 2016b). In Merthyr Tydfil, local interviewees described the lengths that Miller Argent had gone to seek its 'social licence to operate', to 'win hearts and minds' as one local campaigner labelled it (interview, 28 July 16). The establishment of a community benefit fund that will

'eventually accumulate up to £11 million worth of contributions' for residents around Ffos-y-Fran is proclaimed on the front page Miller Argent's website, alongside its 'investment to substantially improve the environment', accompanied by pastoral images of hay bales and local schoolchildren sporting Miller Argent sponsored football kits (<http://www.millerargent.co.uk/>). BHP Billiton's website evokes similar language and imagery to pre-empt and deflect criticism. Its website reveals dedicated sections for 'anti-corruption compliance', 'climate change: portfolio analysis', 'indigenous people', 'sustainable supply chains', 'governance and transparency', 'product stewardship' and 'respecting human rights' (<http://www.bhpbilliton.com/our-approach>, 2016). As one NGO interviewee explained, IndoMet has in some ways been noticeably different from other coal mining projects operating in this region. For example, differences lie in how BHP has been "under a global microscope" - with NGOs monitoring its activities closely - and in how it has invested in CSR publicity work and indigenous rights studies in this area to "appease" communities, NGOs and shareholders (interview with NGO field staff member in Central Kalimantan, December 2016). Companies promote social welfare programmes as a means to acquire greater legitimacy, neuter criticism and defuse potential conflicts, recognizing that 'corporate security begins in the community' (Welker, 2009). This speaks to the difficulties of building and sustaining movements, and draws attention to the 'dispersed agencies' within resultant protest assemblages, which are structured through diverse spatial imaginaries and practices (McFarlane, 2009). It also illustrates the need for ongoing responsiveness within social movements, alert to dynamic and shifting modalities of power.

In denouncing the techniques and practices that produce and perpetuate 'hydrocarbon modernity', mobilizations against coal challenge industry narratives and raise probing questions about knowledge production, capital ownership, and the modes of expertise employed to rationalize and legitimate industry operations. For example, the claims of Miller Argent concerning its 'community investment' appear at odds with its threats to sue Caerphilly County Borough Council following rejection of its planning application at Nant Llesg (Vidal, 2015), and the articulation of 'contentious politics' at strategic sites effectively draws attention to grievances against opencast mining. However, while the *End Coal Now* protest camp provided an important political opening for re-igniting national debate around energy and climate change, interjecting at a strategically significant moment (coinciding with the Welsh assembly election and proposed expansion at Nant Llesg), it also provoked dilemmas and limitations concerning its ephemeral presence in such places (notwithstanding the continued campaigning of UVAG). Concerning coal in Kalimantan, protest events outside BHP-Billiton's headquarters in London also highlighted differential views on what UK-based NGO strategies should be in the aftermath of the company's decision to exit the IndoMet and give shares over to Adaro - and how UK advocacy networks, which previously focused on the mandate of 'getting BHP out', would adapt. WALHI was better placed to take a leadership role in this, having begun work with communities in Central Kalimantan to map out historical land claims in coal producing regions. As we have argued, protest assemblages in the UK and Indonesia have unified in an overarching banner of opposing coal while simultaneously mobilizing around the recognition that "resource struggles are never only about resources" and indeed that "political economy and cultural politics are inseparable in resource conflicts" (Perreault and Valdevia, 2010: 697). Efforts of campaigners have been adaptive in how they have "jumped" scales (e.g. from local Indonesian community to the global investor to the provincial scale, and from one Welsh valley to the realm of international policy under the Paris Agreement) and how they have navigated dilemmas in responding to not just the immediate effects of coal but the much broader relationships through which coal mining operates.

## 6. Conclusion

This paper has re-conceptualized how coal is entangled with broader configurations of political and economic power, drawing attention to the ways in which assemblages of protest have connected geographically dispersed interests to contest the prevailing logics of incumbent, carbon-based energy regimes. Understanding struggles in Wales and Kalimantan helps to counter modernist conceptions of abstract energy ‘resources’, which are often aimed at inscribing boundaries between nature and culture (Richardson and Weszkalnys, 2014: 22) and instead highlight coal’s situated, contentious and hybrid character. Coal is produced through cultural appraisals of utility and value, and this is inherently a conflictual process, since ‘resources’ “become” only through the triumph of one imaginary over others’ (Bridge, 2009b: 1221). The discursive construction of coal mining contestations needs to recognise not just one form of injustice but rather complex socio-ecological conflicts and entanglements with the lives and identities of communities rooted in particular places.

In an era of global climate change, the social and material worlds that coal inhabits are unstable and contingent. As case studies from the UK and Indonesia demonstrate, large-scale mining operations premised on capitalist logics of accumulation have encountered collective challenges from diverse, multi-scalar alliances. Translocal solidarities across social movements disrupt processes and practices that facilitate extraction, mobilizing at critical points to articulate claims framed through a common discourse of environmental justice. Such interjections draw our attention to the myriad ways in which coal is imagined, experienced and enmeshed within complex assemblages, which in turn display ‘emergent capacities’ and are prone to ‘reconfiguration, conversion and adaptation’ (Haarstad and Wanvik, 2016: 9). The distributed agencies engendered within these protest assemblages highlight ambiguities of linking social movements, whose activities are often only loosely co-ordinated. However, in both post-industrial Wales and along Indonesia’s ‘resource frontier’, the diverse geographical alliances on display attest to the growing synthesis and resonance between local conflicts and broader environmental struggles – embodied in a global campaign to ‘end coal.’ Research that pays close attention to new sites of dissent and connections between disparate struggles against coal, recognizing its material and political contingencies, will be valuable in the year to come, as protest assemblages continue to open up new space for collective action.

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